

NH Department of Environmental Services

REQUEST FOR PROPOSALS

Environmental Indicator Development

The **New Hampshire Estuaries Project (NHEP)** requests proposals for projects that will result in new environmental indicators for estuarine eutrophication, bacteria and toxic contaminant loads from stormwater, or marine invasive species.

OVERVIEW

The NHEP is requesting proposals from qualified individuals or organizations to conduct activities that will result in new environmental indicators for estuarine eutrophication, bacteria and toxic contaminant loads from stormwater, or invasive species.

A total of \$35,000 in NHEP funding is available. Applicants may submit project proposals for the whole amount. Matching non-federal cash or in-kind services **are not** required for these funds.

Funding for this program is provided through the U.S. Environmental Protection Agency. Therefore, all federal requirements of the Clean Water Act, as amended, and all State requirements must be adhered to and will be part of a contract for services. A contract will be executed between the party selected and the State for submission to the Governor and Executive Council for approval. Project activities must be completed no later than December 31, 2005.

Five copies (including one original) of the proposal plus an electronic copy (on disk) must be received by Phil Trowbridge, NHEP Coastal Scientist, NH DES, PO Box 95, Concord, NH 03302-0095, no later than 4:00 PM on November 12, 2004. To Fed Ex send to: Phil Trowbridge, NHEP Coastal Scientist, NH DES, 29 Hazen Drive, Concord, NH, 03301. Faxed and emailed proposals will not be accepted.

Direct questions to Phil Trowbridge, NHEP Coastal Scientist, at (603) 271-8872 or ptrowbridge@des.state.nh.us.

GENERAL INFORMATION

Background: The NHEP *Monitoring Plan* describes the indicators that the NHEP uses to measure progress toward management goals and objectives. The plan also contains a chapter on “research indicators” which are subjects for which research is needed to develop new indicators. The *Monitoring Plan* is available at www.nh.gov/nhep.

The Technical Advisory Committee reviews the *Monitoring Plan* annually to determine if the monitoring approaches are still relevant and to identify emerging issues that should be included. In 2004, the Technical Advisory Committee was asked to prioritize the research indicators from the plan and any other emerging subjects for this indicator development RFP. The group chose

three focus areas for the RFP: (1) Estuarine eutrophication; (2) Bacteria and toxic contaminant loads from stormwater; and (3) Marine invasive species. The first two subject areas correspond to several research indicators listed in the *Monitoring Plan*. Invasive species are not in the *Monitoring Plan* but were identified as a growing issue for NH's estuaries.

Eligible Activities: Proposals must address at least one of the following three focus areas.

1. Indicators of eutrophication for estuarine waters

Eutrophication is an emerging issue in the Great Bay Estuary. The NHEP *Monitoring Plan* already contains several indicators to track nutrient load and availability in the Bay:

NUT1: Annual load of nitrogen to Great Bay from WWTF and Watershed Tributaries

NUT2: Trends in Estuarine Nutrient Concentrations

NUT3: Trends in Estuarine Particulate Concentrations

NUT8: Trends in Biological Oxygen Demand Loading to Great Bay

In addition, the NHEP also has indicators for eutrophication response in the Bay:

NUT5: Exceedences of the Instantaneous Dissolved Oxygen Standard

NUT6: Exceedences of the Daily Average Dissolved Oxygen Standard

NUT8: Percent of the Estuary with Chlorophyll-a Concentrations greater than State Criteria

Despite these indicators, the scientific consensus is that sensitive and appropriate indicators for eutrophication in Great Bay have not yet been developed. The NHEP *Monitoring Plan* has identified two specific research indicators for eutrophication in the Bay: (1) proliferation of nuisance macroalgae and (2) an eelgrass nutrient pollution index. Therefore, these two subject areas can be pursued under this RFP. However, other eutrophication indicators may also be developed either from new analyses of existing data or from new environmental measurements.

Proposals to address this focus area of the RFP should describe a project that will develop sensitive and appropriate indicators of eutrophication response in Great Bay. The indicators must satisfy the four elements from EPA's *Evaluation Guidelines for Ecological Indicators* (2000):

- Conceptual Relevance: Is the indicator relevant to the assessment question (management concern) and to the ecological resource or function at risk?
- Feasibility of Implementation: Are the methods for sampling and measuring the environmental variables technically feasible, appropriate, and efficient for use in a monitoring program?
- Response Variability: Are human errors of measurement and natural variability over time and space sufficiently understood and documented?
- Interpretation and Utility: Will the indicator convey information on ecological condition that is meaningful to environmental decision-making?

Each proposal will be evaluated based on how well it answers the questions from EPA (2000) or presents a plan for how these questions will be answered by the proposed work. A copy of the EPA document can be downloaded from http://www.epa.gov/emap/html/pubs/docs/resdocs/ecol_ind.pdf.

2. Indicators of stormwater loads for bacteria and toxic contaminants

One of the NHEP's priorities is to reduce bacteria pollution caused by stormwater runoff. To that end, significant NHEP resources have been put toward reducing bacteria in stormwater runoff from the urban centers around the estuary. Therefore, a high priority monitoring question is "Has wet weather bacterial contamination changed significantly over time?" The NHEP found that the existing monitoring programs for bacteria indicator species did not have sufficient power to detect meaningful trends because of the high variability in water quality during storms (See description for BAC3 in the NHEP report "Evaluation of Monitoring Programs for the NHEP *Monitoring Plan*," available at www.nh.gov/nhep). Therefore, new methods or approaches are needed to answer this question.

NHEP management objective WQ2-1B is to "Reduce toxic contaminants levels in water so that no levels persist or accumulate according to State WQS in Ws 1700." Concentrations of toxic contaminants in water will be a transient phenomenon that will be difficult to detect in ambient waters. However, a recent study by Jones and Gaudette (2001) has been able to detect significant loads of some trace metals to the Great Bay Estuary from stormwater. At this point, more research is needed to answer a number of questions before toxic contaminants in stormwater can be used as an indicator by the NHEP.

Proposals to address this focus area of the RFP should describe a project that will develop sensitive and appropriate indicators of stormwater loads for bacteria and/or toxic contaminants to NH's estuaries. The indicators can be based on new environmental measurements or new analyses of existing data. The indicators must satisfy the four elements from EPA (2000):

- Conceptual Relevance: Is the indicator relevant to the assessment question (management concern) and to the ecological resource or function at risk?
- Feasibility of Implementation: Are the methods for sampling and measuring the environmental variables technically feasible, appropriate, and efficient for use in a monitoring program?
- Response Variability: Are human errors of measurement and natural variability over time and space sufficiently understood and documented?
- Interpretation and Utility: Will the indicator convey information on ecological condition that is meaningful to environmental decision-making?

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http://www.epa.gov/emap/html/pubs/docs/resdocs/ecol_ind.pdf.

3. Marine invasive species

The NHEP *Monitoring Plan* does not have any indicators for invasive species. Invasive species were not part of the original NHEP Management Plan. However, the Technical Advisory Committee and the Shellfish and Living Resources Team have identified invasive species as an emerging issue for NH's estuaries.

Proposals to address this focus area of the RFP should describe a project that will develop sensitive and appropriate indicators for detection of invasive species in NH's estuaries. The indicators can be based on new environmental measurements or new analyses of existing data. The indicator must satisfy the four elements from EPA (2000):

- Conceptual Relevance: Is the indicator relevant to the assessment question (management concern) and to the ecological resource or function at risk?
- Feasibility of Implementation: Are the methods for sampling and measuring the environmental variables technically feasible, appropriate, and efficient for use in a monitoring program?
- Response Variability: Are human errors of measurement and natural variability over time and space sufficiently understood and documented?
- Interpretation and Utility: Will the indicator convey information on ecological condition that is meaningful to environmental decision-making?

Each proposal will be evaluated based on how well it answers the questions from EPA (2000) or presents a plan for how these questions will be answered by the proposed work. A copy of the EPA document can be downloaded from
http://www.epa.gov/emap/html/pubs/docs/resdocs/ecol_ind.pdf.

In addition, proposals to develop invasive species indicators must also include a work task to develop a response plan that clearly outlines the management actions that can be taken to combat new invasions that are detected by the indicator.

Project Schedule: Projects are expected to start on or around February 1, 2005 and must be completed no later December 31, 2005. The contract with the successful applicant must be approved by the Governor and Executive Council prior to initiation.

QAPPs: All NHEP-funded projects involving monitoring or other data collection and analysis require a Quality Assurance Project Plan (QAPP). The QAPP must be approved by the NHEP and the Environmental Protection Agency prior to initiation of any fieldwork or data collection activities. For more information on QAPP requirements, contact Phil Trowbridge, NHEP Coastal Scientist, at 271-8872 or ptrowbridge@des.state.nh.us.

Reporting: The successful applicant must submit interim project status reports and a final project report, in addition to any other work products identified. Interim reports are required quarterly

and must be submitted electronically. The final report must comply with NHEP final report guidelines.

PROPOSAL REQUIREMENTS

In order to be considered, five hardcopies (including one original, so marked) of the proposal, plus an electronic copy (on disk), are required from the applicant. The proposal must include the following elements:

1. COVER LETTER – Signed by a person authorized to legally bind the applicant. The letter should contain a brief statement of the applicant’s understanding of the work to be done and a commitment to perform the work within the time period.
2. TITLE PAGE – Show the proposal’s topic, the organization name, address, telephone number, fax number, email address, name of contact person, and the date of the proposal.
3. PROJECT NARRATIVE – Describe the proposed approach and process that will be used to accomplish the scope of work to be performed. It should clearly define the following:
 - a) Project objective, including a description of how the project will specifically address one of the eligible activities for this RFP.
 - b) Background information
 - c) Geographic scope of the project
 - d) A detailed list and description of specific work tasks to accomplish the project objective
 - e) Work products or deliverables generated for work tasks
 - f) Expected project results and criteria for measurement/evaluation of project success
 - g) A schedule for all work tasks
4. PROJECT BUDGET AND PAYMENT TERMS – Applicants must submit a total project budget, which includes NHEP funds up to \$35,000. **Matching funds are not required;** however if the applicant intends to provide additional funds for the project (either cash or in-kind services to complete the project), then these additional funds or value of services should be included in the total budget and itemized separately from NHEP funds.

The overall budget must be broken into categories including personnel (include salary and benefits as separate items), travel, equipment/supplies, sub-contractual, indirect, and any other relevant categories. The proposal must also include a budget narrative to support the budget. The narrative should identify hourly rates and hours for personnel, itemize equipment or supplies to be purchased, define items included in the budget category “Other” as applicable, and provide any additional information to support the budget.

The NHEP will not be responsible for expenses incurred in preparing proposals and such costs should not be included.

Typical payment terms are quarterly payments reimbursing allowable expenses incurred by the contractor. If the typical terms are not acceptable, the applicant should provide their requested payment schedule and a justification.

5. DESCRIPTION/QUALIFICATIONS OF APPLICANT – Applicants must describe the organization, including its mission and experience with similar projects. The proposal must identify the individual(s) that would work on this project, including any subcontractors. If subcontractors have been identified, the process or rationale for their selection should be described. If subcontractors have not been identified, the process for selecting them should be described.

EVALUATION OF PROPOSALS

A subcommittee of the NHEP Management Committee, NHEP staff, and other technical reviewers will evaluate all proposals. The review team will review complete applications and each proposal will be scored according to the following criteria:

- The degree to which the proposed project addresses one or more of the eligible activities for this RFP
- The thoroughness of the proposed project plan (clear work tasks and deliverables, measurable results, schedule)
- The qualifications of the applicant
- Feasibility of the project given the proposed budget and schedule

The NHEP reserves the right to reject all proposals, to waive any irregularity in a proposal, and to accept or reject portions of any proposal. The NHEP also reserves the right to request additional information from any or all parties submitting proposals to assist in the evaluation process.

SCHEDULE

10/08/04: Request for Proposals released by the NHEP
11/12/04: Proposals due to the NHEP
12/10/04: Target date for proposal selection
02/01/05: Target date for projects beginning
12/31/05: Project completed

Proposals must be received by the NHEP no later than 4:00 PM on November 12, 2004.

Direct any questions on this Request for Proposals to Phil Trowbridge, NHEP Coastal Scientist, at (603) 271-8872 or ptrowbridge@des.state.nh.us.